

Amendments to the Specification:

Please replace paragraph 0043 with the following replacement paragraph:

[0043] The smart controller 310 is also attached to one or more sensors 320, 330, 340 capable of monitoring various qualities of the fuel cell or accepting inputs from the outside world. ~~Sensor 1~~ Sensor 320 could be, for example, a thermometer that measures the temperature of the electrolyte material in the fuel cell or fuel cell stack. When the temperature of the fuel cell is within the appropriate range for operation of the fuel cell, ~~sensor 1~~ sensor 320 would send a signal to the smart controller 310, and the smart controller 310 could adjust the amount of electrical current to account for the waste heat generated by the fuel cell or stack of fuel cells.

Please replace paragraph 0044 with the following replacement paragraph:

[0044] ~~Sensor 2~~ Sensor 330, could be, for example, an ammeter that measures the electrical current generated by the fuel cell or stack of fuel cells. In this embodiment, ~~Sensor 2~~ sensor 330 could send out continuous information about the electrical output of the fuel cell or fuel cell stack. The smart controller 310 could analyze the information coming from ~~Sensor 2~~ sensor 330, and use that information to determine the ideal current in the resistive conductor 220 (i.e. the current that corresponds to the temperature which maximizes the electrical output of the fuel cell or fuel cell stack).

Please replace paragraph 0045 with the following replacement paragraph:

[0045] ~~Sensor 3~~ Sensor 340 could be, for example, a switch that is operated by a human operator. If the present invention were used in an electrical device (a cellular telephone for example) it would be beneficial to allow the owner to shut down operation of the fuel cell or fuel cell stack when the device is not in use. In this embodiment, the smart controller 310 could shut off electrical current in the resistive conductor 220 when the owner switches the device off. The above examples are for the purpose of illustrating that the present invention may be used with a smart controller that is capable of receiving inputs from the outside world, and adjusting the heat of the fuel cell or fuel cell stack accordingly. The present invention is not limited to the examples used here to suggest possible inputs for the

smart controller, nor is it limited to the three sensors shown in Fig. 3. Those skilled in the art will recognize that the smart controller is capable of receiving input from any number of sensors.

Please replace paragraph 0048 with the following replacement paragraph:

[0048] The system memory 430 includes computer storage media in the form of volatile and/or nonvolatile memory such as read only memory (ROM) and random access memory (RAM). A basic input/output system (BIOS), containing the basic routines that help to transfer information between elements within computer ~~110~~ 410, such as during start-up, is typically stored in ROM. RAM typically contains data and/or program modules that are immediately accessible to and/or presently being operated on by processing unit ~~120~~ 420.

Please replace paragraph 0049 with the following replacement paragraph:

[0049] The computer ~~110~~ 410 may also include other removable/non-removable, volatile/nonvolatile computer storage media. By way of example only, computer storage media may include a hard disk drive that reads from or writes to non-removable, nonvolatile magnetic media, a magnetic disk drive that reads from or writes to a removable, nonvolatile magnetic disk, and an optical disk drive that reads from or writes to a removable, nonvolatile optical disk, such as a CD-ROM or other optical media. Other removable/non-removable, volatile/nonvolatile computer storage media that can be used in the exemplary operating environment include, but are not limited to, magnetic tape cassettes, flash memory cards, digital versatile disks, digital video tape, solid state RAM, solid state ROM and the like. The hard disk drive is typically connected to the system bus 421 through a non-removable memory interface, while magnetic disk drives and optical disk drives are typically connected to the system bus 421 by a removable memory interface.

Please replace paragraph 0051 with the following replacement paragraph:

[0051] The computer 410 may operate in a networked or distributed environment using logical connections 471 to one or more remote computers, such as a remote computer 470. The remote computer 470 may be a personal computer, a server, a router, a network PC, a peer device or other common network node, and typically includes many or all of the

elements described above relative to the computer 410, although only a memory storage device. The logical connections 471 may include a local area network (LAN), and a wide area network (WAN), and other networks/buses. Such networking environments are commonplace in homes, offices, enterprise-wide computer networks, intranets and the Internet.

Please replace paragraph 0058 with the following replacement paragraph:

[0058] A preferred embodiment of the present invention is displayed in FIG 6. FIG 6 combines aspects of the present invention set forth in the previous figures to provide a complete picture of an embodiment of the invention. FIG 6 provides a Solid Oxide Fuel Cell (SOFC) or fuel cell stack comprising an anode 610 into which Hydrogen 601 may be fed, a cathode, 690, into which Oxygen 695 may be fed, and an electrolyte 620. A copper wire 630 serving as the resistive conductor 220 is coiled around the electrolyte 620. The copper wire 630 is connected via connecting wire 680 to a battery 670. Insulation 650 surrounds the electrolyte 620 coiled with copper wire 630. A variable resistor 660 capable of automatically controlling the current in the heater circuit (as illustrated in FIG 3) is placed along the connecting wire 680.

Please replace paragraph 0062 with the following replacement paragraph:

[0062] The smart controller 710 may be connected to a host system via host interface 712 and may include inputs for voltage 714 and temperature sensing 715. The smart controller 710 may also include output control for the switch 716 (i.e. the heater control) and ~~output controls~~ a pump control 713 for the fuel pump 713 780, which may, for example, pump fuel from the fuel tank 790 to the fuel reformer 770.